

REMARKS

In this amendment, claims 1-30 are cancelled and new claims 31-82 are added to better claim the protection to which applicant believes he is entitled. The new claims more particularly define the invention having regard to background art of which applicant is aware, including references which have been considered in connection with the corresponding international application number PCT/US01/14404 published as WO 01/84339 and other documents of which applicant has become aware and which have been made of record. To the best of applicant's belief, none of the documents mentioned below, nor any other information known to applicant, requires surrender of any equivalent of any limitation set forth in the presently pending claims, and no such surrender is made.

The invention as now defined in new base claims 31, 46 and 82 relates to over-the-air broadcast distribution of information, especially of bulky multimedia information (claims 32 and 50) from a wireless transmitter for simultaneous reception by multiple users. The claimed invention is limited to transmitting the information content from a cell phone transmitter and to using computerized cell phone receivers for reception of the information (claim 30) preferably without having to initialize with the broadcaster (claims 31, 46 and 82). In contrast to the one-to-one operation of conventional cell phone systems, in the system of the claimed invention each cell phone receiver can receive the broadcast simultaneously.

As an alternative to cell phones, the receivers can be receiver-enabled computers capable of receiving cell phone transmissions (claim 46) as is described at page 7, lines 15-20 and elsewhere in applicant's specification. Use of a computer built into a cell phone is described, for example, at page 17, lines 17-18 while use of a computer enabled with a cell phone receiver or receiving module is described generally at page 5, lines 21-23 and elsewhere in the specification.

The invention can be implemented on an existing cellular (or mobile) phone system, with simple modifications, in particular to enable the cell phone receivers to receive the broadcast promptly, without having to wait for the device to initialize with the broadcaster. It is noted that small personal phones known as "cell phones" in the U.S. are often called "mobile phones" or "mobiles" in other countries.

The claimed invention makes possible a new, high capacity, low investment, ultra-convenient, truly portable channel for entertainment, business presentations and other high bandwidth content that can bring the material directly to the individual, wherever they may be, not to their desktop or to a laptop left in the office or at home. No one prior to the present invention has recognized the potential benefits of using a cellular phone communication system for broadcast distribution of multimedia content to multiple users, e.g. to an audience of thousands. No one prior to the inventor has recognized that conventional cell phone systems can, with minor adaptation, be used for multimedia broadcast with simultaneous reception and that such reception can be facilitated to avoid delays in reception if the phones or system are modified to avoid initialization.

Turning to the background art of which applicant is aware, Birdwell U.S. Patent No. 6,041,359 has for objective, solving problems arising from the inability of clients to communicate back over a broadcast communication link to a server (column1, line 66 to column 2, line 12) for the purpose of using broadcast networks to deliver computer data and other content to clients.

Birdwell discloses a data delivery system which includes the broadcast of data from a transmitter 36 to clients 24 (1) -(M) as a final link in the data distribution system. Birdwell is clearly excluded by applicant's claims because clients 24 (1) -(M) are not cell phones and Birdwell's broadcast network 30 does not include a cell phone transmitter. Nor is there any suggestion of avoiding initialization with the broadcaster.

Exemplary clients 24 (1) -(M) in Birdwell are desktop computers, laptop computers and computer-enhanced television units (column 4, lines 19-21) which may run Windows® NT (column 4, line 43), confirming that Birdwell does not remotely suggest use of cell phones. Furthermore, Birdwell's broadcast network is unidirectional which is quite the antithesis of applicant's claimed employment of a cell phone broadcast system. Still further, Birdwell requires a network bandwidth allocation and reservation system which is something quite different from applicant's claimed invention and is a barrier to adoption of any of Birdwell's teaching for more general purposes.

Birdwell clearly teaches away from use of cell phone systems for broadcasting multimedia data in several respects. For example, data broadcast from transmitter 36 to clients 24(1)-(M) is labeled as unidirectional in Fig. 1, of Birdwell whereas cell phone systems are bidirectional. Also, the specification at column 4, lines 4-6 teaches that the clients 24(1)-(M) must use a "different back channel" to communicate with the broadcast center, which would not be necessary on a cell phone system. The option at lines 11-15 of unidirectional multicasting on a bidirectional network suggests email "spamming" which is not applicant's claimed invention. Because conventionally the user must dial up and make a one-to-one connection to receive information, e.g. a voice call or email download, one does not think of using a cell phone as a broadcast receiver. Further contraindications lie in the dissimilarity between Birdwell's clients that can be sufficiently cumbersome to be Windows® NT - capable and applicant's "palm-of-the-hand" cell phones and the failure of Birdwell to suggest the desirability and possibility of avoiding the need for initialization of a cell phone.

Birdwell does not teach the limitation wherein the receivers comprise cell phones.

Nor does Fukui et al. USP 6,052,715 teach or suggest applicant's claimed invention or even correct the deficiencies of Birdwell, were it to be combined with

Birdwell which applicant sees no reason to do for the art contains no motivation for such a combination so far as applicant is aware. Fukui et al. discloses an interactive radio network 2, which may include cell phones (col. 14, line 65 to col. 15, line 1). However, radio network 2 is not a pathway for downloading large amounts of data, such as multimedia, to many users simultaneously as is provided by applicant's invention. To the contrary, Fukui et al.'s interactive radio network 2 is merely employed for transmitting and receiving small amounts of data such as a Web server command or control information (abstract and col. 5, lines 24-30). The large amount of data is superimposed on an empty portion of a television signal and is broadcast (abstract lines 13-14).

Accordingly, Fukui et al does not teach the broadcast of (large amounts of) multimedia data to multiple users simultaneously over a cellular phone network, from a cellular transmitter to cell phone receivers, any more than did Birdwell.

Nor does either Birdwell or Fukui et al, teach the use for data reception of cell phones that are capable of operation without initialization. Birdwell's terminals are not cell phones, and the use of modified cell phones is not remotely suggested by either reference.

Nor would one skilled in the art contemplate using cell phones to receive large amounts of data at the relevant date of Fukui et al, 1996 or 1997, in view of the limited data handling capabilities of cell phone devices at that time. At no time prior to applicant's invention, absent impermissible hindsight, would the worker of ordinary skill consider using a cellular phone system for simultaneous reception of a multimedia broadcast because on the one hand there were no broadcast transmissions for receivers to tune to, and on the other hand there is no point in attempting broadcast transmissions if they are not going to be received. Multimedia broadcasting over a cellular phone system requires an unobvious rethink of the inherent one-to-one nature

of cellular telephony. Provision of an entirely new service is beyond the scope of workers of ordinary skill.

Like applicant, Birdwell and Fukui et al. have for objective the solution of problems relating to the downloading of large files, especially multimedia files and each has a broadcast solution. However, each of these broadcast solutions is effected in a different medium from that employed by applicant, as defined in new claims 31-82. Birdwell employs radio (the references at column 4, lines 10-11 to "satellite" and "microwave" are respectively a means of delivery and a waveband) while Fukui employs television. In contrast, applicant's uses a cell phone system.

Applicant's claimed use of a cell phone system for broadcast of multimedia content provides the unexpected benefit, not remotely suggested by the art, of enabling a mobile user to have continuous reception of multimedia while moving through a building, or between buildings. For example in Manhattan, New York where television and FM reception is notoriously directional with ghosting and sever attenuation attributable to surrounding structures, cell phone, entertainment and multimedia can be received over a cell phone with excellent clarity, in many instances. In contrast to FM radio or TV, which require relatively large antennae, or for satellite, even dish antennae, that must be oriented toward the transmission source for good reception, cell phones have compact antennae that are not significantly directional providing good reception on the move, which conventional radio and TV broadcast networks do not.

Krebs USP 5,557,320 relates to a video distribution system which addresses congestion problems occurring in transmitting video across heterogenous networks comprising telephone, wireless, satellite, etc. (column 1, lines 5-7) by employing a managing network provider. The managing network provider schedules each video request and sets up control points to each receiver, on a per transmission basis (claim 1). Krebs is not a broadcast system and broadcasting to multiple receivers would be the

antithesis of Krebs objective of scheduling a time and selecting a virtual transmission path to each receiver.

Leighton USP 6,108,703 is believed not at all pertinent to applicant's claimed invention because Leighton relates to management of content delivery on the Internet using multiple servers to provide a fault tolerant infrastructure (column 2, lines 26-31). Neither Leighton nor Krebs teaches or suggests use of a cellular mobile phone system for broadcasting content, especially periodicals, to multiple users which can be operated in off hours, utilizing otherwise dormant resources.

The application is believed now to be in condition for examination. Early and favorable examination is requested. If for any reason the Examiner feels that consultation with Applicant's attorney would be helpful in the advancement of the prosecution, he is invited to call the telephone number below for an interview.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope, postage prepaid, addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA, 22313-1450 on July 24, 2003


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